

**INSTRUCTOR TRAINING TECHNIQUE AND EVALUATION
FOR THE UNITED STATES NAVY**

WILLIAM JOHN CASPARI

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INSTRUCTOR TRAINING TECHNIQUE AND EVALUATION
FOR THE UNITED STATES NAVY

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William John Caspari
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TABLE OF CONTENTS

<u>Chapter</u>	<u>Page</u>
<p>I. THE PROBLEM AND ITS SCOPE.</p> <p style="padding-left: 40px;">The Problem</p> <p style="padding-left: 40px;">Need for the Study</p> <p style="padding-left: 40px;">Why Examine Instruction and Instructor Training Techniques?</p> <p style="padding-left: 40px;">Development of the Navy Instructor Training Program</p> <p style="padding-left: 40px;">The Navy's Problem of Obtaining the Services of the Professional Educator</p> <p style="padding-left: 40px;">Delimitations</p> <p style="padding-left: 40px;">Method of Making This Investigation</p> <p style="padding-left: 40px;">Definitions</p>	<p>1</p>
<p>II. SELECTION OF PROSPECTIVE INSTRUCTORS</p> <p style="padding-left: 40px;">Introduction</p> <p style="padding-left: 40px;">Developing the Selection Program</p> <p style="padding-left: 40px;">Factors of Selection</p> <p style="padding-left: 40px;">Selective Admission</p> <p style="padding-left: 40px;">Summary</p> <p style="padding-left: 40px;">Selection in the Navy</p>	<p>15</p>
<p>III. PRE-SERVICE TRAINING CURRICULUM.</p> <p style="padding-left: 40px;">Introduction</p> <p style="padding-left: 40px;">Curriculum Content</p> <p style="padding-left: 40px;">Practice Teaching</p> <p style="padding-left: 40px;">Curriculum Planning and Development</p> <p style="padding-left: 40px;">Curriculum Trends</p> <p style="padding-left: 40px;">Summary</p> <p style="padding-left: 40px;">The Navy Instructor Training Curriculum</p>	<p>31</p>
<p>IV. EVALUATION IN INSTRUCTOR TRAINING.</p> <p style="padding-left: 40px;">Introduction</p> <p style="padding-left: 40px;">Purposes</p> <p style="padding-left: 40px;">Types of Evaluation</p> <p style="padding-left: 40px;">Evaluation of the Curriculum</p> <p style="padding-left: 40px;">Follow-up Studies</p> <p style="padding-left: 40px;">Evaluation of Student Growth</p> <p style="padding-left: 40px;">An Evaluation Program of Student Growth</p> <p style="padding-left: 40px;">Evaluation of Instructor and Instruction</p> <p style="padding-left: 40px;">The Ohio Teaching Record</p>	<p>46</p>

ChapterPage

Student Evaluation of the Instructor
Instructor Self Evaluation
Summary
Evaluation in Navy Instructor Training

V. IN-SERVICE TRAINING. 69

Introduction
Types of In-Service Training
Summary
In-Service Training in Navy Schools

VI. INSTRUCTOR TRAINING AS VOCATIONAL EDUCATION 84

Introduction
Goals Revealed in Evaluation
General and Vocational Education and the
Navy
Navy Training
Summary

VII. CONCLUSIONS. 96

Functions of the Instructor Training
School
Selection
Curriculum
Evaluation
In-Service Training
A Continuous Program

BIBLIOGRAPHY 104

CHAPTER I

THE PROBLEM AND ITS SCOPE

The Problem

This study was made to identify instructor training techniques and evaluation programs for use in the United States Navy. Modern training techniques and evaluation programs that have proven successful and efficient, or are generally used by civilian educational institutions were reviewed. The number of techniques and programs was then narrowed down to those that could be useful to the Naval Service, and these were analyzed and studied in more detail.

Need for the Study

There are approximately two hundred and fifty schools presently being maintained and operated by the Navy with an average attendance of nearly fifty-seven thousand enlisted and officer students. These figures fluctuate widely from time to time, but training is ever a keynote in the building and maintenance of our Navy. During World War II the crew of a battleship represented at least fifteen hundred aggregate years of training and some twenty-five hundred years of experience. About eighty percent of the two thousand enlisted men aboard such a ship completed at least the

equivalent of a trade school course during their naval service. All were required to study and were in training for a specialty as long as they were on active duty.

In the days of the "old Navy", in fact, almost up to the beginning of World War II, the Commanding Officer of a naval vessel was master of his ship in every sense of the word. He had, of course, military control of the ship, but his power and functional duty did not end there. Through training and many years of experience, during which he was a member of every department aboard ship at one time or another, he knew the functions, operations, and the problems of nearly every phase of life and piece of material aboard. He knew the principles of operation of the machinery. He knew what was necessary to keep the machinery operable, what the common failures were, and approximately what was required in effort, time, and material for repair. He could personally efficiently evaluate reports to him on any material or personnel problem on his ship. He could issue orders effectively, based almost entirely on his personal knowledge and evaluation.

The picture today has changed. With increase in the size of ships and the number of men required to operate them, the extended use of electronics, and the rapid development of highly technical machinery, one phase of the Commanding Officer's control has been informally and inadvertantly lost. Although responsibility and final evaluation are ultimately

still his, he must now depend to a much greater extent on the services, judgment, and the word of others. More authority must be delegated down the line.

This shift in efficacy has enhanced the importance of the enlisted man and the junior officer. They are the personnel who must be trained as specialists and technicians. Elements of cost, time, and material, peculiar to the Navy, require that most of these specialists and technicians be trained in schools established and maintained by the Navy. Furthermore, in most instances they must be instructed by Navy personnel.

The Navy personnel assigned to duty as instructors are not, within the usual sense of the term, professional instructors, yet in another sense they are. The naval enlisted man or officer spends most of his career instructing others. Principles stressed in instructor training are closely related to those of leadership. It is a well established fact that all Navy personnel must be leaders, and it is fast becoming an equally widespread belief that all Navy personnel must have the ability to instruct others. However, in assignment to duty as an instructor in an organized school, they come from other naval activities, instruct for one or more years, and then move on to other duty. Instructing, in the formal school situation, is just another "tour of duty" in their naval careers. To further complicate matters, the students they are instructing cover a wide range of age,

personality, educational qualifications, and in many instances of military rank or rating. In most schools there is little or no time available for instructing students in the art of efficient study or learning. The Navy instructor can expect little conscious help from the student in the learning process.

The Navy realizes the tremendous importance of efficient training and, consequently, of effective instructor training. This is true to the point that now a certain amount of instructor training is required for enlisted men to be promoted to certain petty officer ratings. Expansion and technological development, with required specialization by personnel, are making this importance increasingly evident. At the present time there are some 450 specialties in the Navy. Approximately the same problems are encountered in training prospective instructors as are mentioned in connection with training students in general. There are many and complex problems to instructor training in the Navy. The Training Section of the Bureau of Naval Personnel, administrators of Navy training programs, and other groups ashore and afloat are constantly in search of more effective instruction techniques.

Why Examine Instruction and Instructor Training Techniques?

A need for careful examination of instructor training techniques is found even in the old and well established

training schools of professional teachers. Dean Harry J. Carmen of Columbia University recently made the statement that "We have persisted in the assumption that good teachers are born, hence cannot be made. . . . The truth of the matter is that teachers can be made, but at present are not being made, or are being made badly."¹ Dean Carmen goes further to point out that too many present day instructors are able researchers and are well versed in their particular fields but are not teachers.

Lloyd S. Woodburne, Dean of the College of Literature, Science and the Arts, Michigan University, is quoted as saying, "If a man is a brilliant scholar, he must be a passable teacher. If a brilliant teacher, he must be a passable scholar."² If he is all of one or the other, he cannot be an instructor at Michigan. In keeping with this philosophy, Michigan has launched itself on a campaign to improve its instruction. Instructors are being marked by students on clarity, intellectual honesty, fairness in grading, and general effectiveness. Up to the present time the average faculty mark is 3.1, out of a possible 4.0. Five professors have been marked below 2.5. Michigan plans to use these marks for promotion, and if an individual is repeatedly marked low, he may be dismissed.

1. "From Bell to Bell," Time, Vol. 53, (Feb. 29, 1949), p. 68.

2. "Marked Men," Time, Vol. 53, (April 4, 1949), p. 67.

These are examples of the growing awareness of the need for good teaching and teacher training techniques in the professional teaching field. There are also evidences of appreciation of the same needs in the Navy. Some of the steps recently taken to further instructor training are establishment of new schools, programs, and courses; use of more stringent selection programs; introduction of new and improved curricula; publication of periodicals and other printed matter on the subject; and devotion of far more publicity than instruction and instructor training have ever been given before.

Development of the Navy Instructor Training Program¹

With the advent of war, it was apparent to the armed services that measures would have to be taken to improve instruction in its rapidly expanding training activities. At this time, few Navy school instructors had had any training for their jobs.

One of the earliest instructor training programs was developed by the Armored Force Command at its headquarters in Fort Knox, Kentucky. Under the guidance of Colonel Vane C. Fryklund, now President of Stout Institute, this program began in 1941.

1. Historical material in this section was taken from an unpublished article, "Instructor Training in the Navy," by Homer C. Rose, Head of the Curriculum and Instructor Training Section of the Bureau of Naval Personnel, 1949.

The Navy instructor training program began in 1943 when an instructor training officer was ordered to the Service School Command at Bainbridge, Maryland. This officer's orders were to develop shops and laboratories and to improve instruction in every way possible. He was soon joined by five other instructor training officers who were later sent to Navy training stations at Great Lakes, San Diego, Farragut, and Sampson. This group of officers went to work at Bainbridge assisting in the development of the curricula. They encountered many and complex difficulties. There was a shortage of training equipment because materials were badly needed aboard ships. Textbooks, training aids, lesson plans and tests for practical use with available facilities had to be quickly developed.

In September, 1943, the Instructor Training Unit was made a permanent section of the Standards and Curriculum Division, Bureau of Naval Personnel.

By the end of the war in 1945, three major instructor training schools were in operation, and the recognized value of instructor training programs was evidenced by the presence of instructor training officers on the staffs of many commands ashore and afloat. Much credit is due to Captain A. John Bartky, now Dean of the School of Education at Stanford University, and his associates in the Bureau of Naval Personnel for their pioneering work in Navy instructor training.

During the period of demobilization the instructor training officers, all of whom were reserve officers and civilian educators, returned to civilian life. Post war reorganization of the Navy required that a large percentage of the personnel stationed ashore go to sea, and no provisions were made for instructor training schools. However, during the period from 1946 to 1948, it became increasingly evident that in order to maintain the Navy training standards, instructor training would be necessary. Consequently, in January of 1949, instructor training schools were reestablished at Norfolk, Virginia, and San Diego, California.

The staffs of the instructor training schools are composed of a school administrator who is a Lieutenant Commander, one officer assistant, and three well qualified civilian educational specialists. Other instructors are naval personnel selected because of special ability in instructing.

In addition to the schools at Norfolk and San Diego, the following instructor training programs are now being conducted: in-service training at all Navy schools; especially designed courses offered in the naval districts for reserve training; courses offered in Class B schools to qualify enlisted personnel for First Class and Chief Petty Officer rates; a course for officers in the General Line School, a three-week course at Northwestern University each summer for officers assigned to the N.R.O.T.C. program; and training programs for Service School Officers.

Great evolution and development took place in training during the last war, for the Navy had the advice and services of many leaders in the field of education. This factor, coupled with almost unlimited financial backing, military control of students twenty-four hours per day, small classes and individual instruction, practical testing, strongly motivated students, and other advantages held over civilian institutions, led to the development of some aspects of training to a high degree of efficiency. Therefore, a study of formal and informal Navy instructor training programs will reveal that some of the training techniques herein outlined are in use. The problem then becomes one of degree and efficiency of use.

The Navy's Problem of Obtaining the Services of the Professional Educator

During war times, the Navy has been able to invade the field of civilian educators and obtain the services of outstanding men, for these professional groups always stand ready to assist during an emergency. Also, during times of national emergency, the institutions of higher learning, especially those specializing in areas not considered essential, have a scarcity of students which frees the instructors for military assignments.

During period of peace, unfortunately, this is not true. The professional educator favors working in an educational

atmosphere with his colleagues where he can teach students preparing for the teaching profession, or where he can teach in some particular subject matter field.

This has resulted in the Navy's having to pay more than colleges and universities to attract civilians who are willing to work for the government as advisors to the military in staff capacity on instructor training and other problems in education.

Several means of utilizing the services of civilian educators have been instituted. One of these is the annual Naval Reserve Officers Training Course at Northwestern University. The purpose of this training is to help prepare officers who are instructors in the N.R.O.T.C. program in fifty-two leading colleges and universities throughout the country. The three-week course includes such subjects as educational psychology, functional speech, university education as related to the N.R.O.T.C., teaching methods, and supervised practice teaching. The instructional staff includes Navy employed civilian educators, Northwestern University faculty members, and a visiting staff of educators.

Delimitations

There are three major delimitations to this study. First, it is not proposed to attempt determination of techniques that will work for the Navy, only those that can work. There are basic considerations in instructor education that

will invariably apply. It is these that are of interest in this study. Second, there are many highly developed procedures and methods used in administering and carrying out details of the instruction program which are only slightly or not at all useful to the Navy. Examples of these are teacher certification, salary scheduling, placement, etc. These are not under consideration. Third, there are naval institutions of higher learning such as the U.S. Naval Academy, the U.S. Navy Post Graduate School and the Naval War College where professional and senior naval instructors are on duty. Such schools are not being considered. This study is concerned with the determining of techniques that may be used in training instructors for service in recruit training centers, service schools, fleet schools, shipboard training programs, and functional schools.

Method of Making This Investigation

An examination was made of current literature on the form, universality and efficiency of techniques used in naval and civilian instructor training. This included the use of theses, dissertations, books relative to the subject, instruction pamphlets, state and federal governmental studies, and surveys and analyses made by public and private organizations. This was supplemented by visitation of civilian and Navy educational institutions. The Navy has recently established instructor training schools at San Diego, California, and

Norfolk, Virginia. The former was visited in its third month of operation. Information was received through correspondence with the Bureau of Naval Personnel, and civilian and Navy administrators outside of California.

Definitions

U.S. Navy, Naval Service.--These terms are used in reference to the regular Navy. This study does not consider the Naval Reserve Training Program.

Bureau of Naval Personnel.--This is the Bureau of the Navy Department which is headed by the Chief of Naval Personnel who directs the administration of all naval personnel throughout the Naval Establishment; supervises the administration of the Bureau of Naval Personnel; insures the efficient performance of its duties and functions as prescribed by statutory law and delegated by the Secretary of the Navy; and maintains liaison with the Army and Air Force on personnel matters.

Enlisted Personnel.--All personnel in the Navy who are non-commissioned are referred to as enlisted men. This includes all ratings from that of Chief Petty Officer down to the Seaman Recruit. The term "enlisted men" is frequently shortened to "men".

Teacher, Instructor.--These words are used to designate persons actually engaged in instructing others. It does not include school administrators or supervisors. Instructor is ordinarily used in the Navy in preference to teacher.

Teacher or Instructor Training, Teacher or Instructor Education, Teacher or Instructor Preparation.--These terms are used synonymously to cover the period of formal preparation of the prospective instructor. Pre-service training is a term used with reference to this same period and should not be interpreted as relating to any training received prior to joining the Naval Service.

Navy School Types.--This study is primarily concerned with the preparation of instructors for the following types of Navy Schools:

Class "P" Schools are designed to conduct training at a preparatory or basic training level. The length of course for Class "P" Schools varies from eight to twelve weeks.

Class "A" Schools are designed to cover the ground work for general service ratings as Third Class Petty Officers. The curriculum includes all technical qualifications required for third and second class petty officers. The length of course for a Class "A" School varies from nine to forty-four weeks.

Class "B" Schools are designed to prepare enlisted personnel for the higher petty officer rates. The curricula for these schools include all technical qualifications for a first class and chief petty officer. The length of course for a Class "B" School varies from fourteen to sixty weeks.

Class "C" Schools are designed to train enlisted personnel in a particular qualification or skill which does not

cover the full requirements for a general service rate.

The curriculum for these schools is designed around the special skill or qualification which is desired. Class "C" Schools are further divided into C-1 and C-2. The C-1 classification includes all Class "C" Schools in naval establishments and the C-2 classification includes all Bureau recognized special schools operated in manufacturing plants and factories.

Functional Schools, normally for officers, are also available for the training of enlisted personnel. Harbor Defense School, Mine Warfare School, Salvage School, Guided Missiles School, Net Training School, Explosive Ordnance Disposal School, and others are in this classification.

Fleet Commanders are authorized to set up Fleet Schools. These may be afloat or ashore and may be established for training either or both enlisted men and commissioned officers.

Recruit Training - This is a period of training through which all personnel go upon first enlisting in the Navy. The course of instruction provides the fundamentals necessary for a smooth transition from civilian to Navy life. It is sub-divided into seven instructional areas: recruit indoctrination; military training; seamanship; ordnance and gunnery, and small arms training; physical training, personal hygiene, and first aid; morning quarters, inspections, competitions and parades; and administrative duties.

CHAPTER II

SELECTION OF PROSPECTIVE INSTRUCTORS

Introduction

The selection of prospective instructors is a continuous process through which the least likely candidates are denied admission to the training program, or are eliminated from the program as it progresses. These two phases are known as selective admission and selective retention. Although this chapter is primarily concerned with the former, it must be emphasized that selective admission is only one formal step in a selection program, the steps of which should complement one another.

The problem of student selection is closely allied with other aspects of the training program. Cues for curriculum formation, guidance needs and methods, and need for further selection may be taken from proper analysis of information collected in the process of selection. Beyond these implications, the immediate problems of selection are to get better qualified candidates for the profession, and to eliminate as early as possible in the training process enough of the least promising candidates to make the supply of instructors approach the demand as nearly as possible.

The selection program that is destined to meet with any degree of success must be preceded by the establishment of some idea, concept, or understanding of who will be good instructors. This concept has proven difficult to formulate even in the civilian education profession where the prospective instructor or supervisor has chosen teaching as a profession, and has availed himself of several years of training in teacher training colleges or schools of education in one of our leading universities. Indeed, sometimes the same instructor will be rated relatively successful and unsuccessful by different supervisors or school administrators. This leads to the conclusion that it is important that the entire educational profession, not just those who operate the selection program, develop the concept of who will be a good instructor.

The problems of selection vary from one school to another. Stringency of selection will be governed by many factors, some of which are beyond the control of the educational institution concerned. Any approach to standardization in selection is complicated by variation in student types, point of selection, source of students, State laws and policies in the case of State schools, instructor demand and fields of instruction for which the students are to be prepared.

Many factors govern, and vary from time to time, the type of student making application for instructor training. Supply and demand, instructors' salaries and general economic

conditions, and various social conditions have a direct influence on recruitment. In some instances State laws may have great influence. The State Universities in Ohio and Nebraska must accept nearly all applicants who are graduates of accredited high schools. At both of these schools relatively unselected students are allowed to enter the School of Education at the freshman level. Student enrollment in New York and New Jersey State Teachers Colleges is governed by the size of the schools and the applicants' qualifications. In the past ten years New York has developed a selection program based on tests of knowledge, academic skill, health, and personality. New Jersey has a similar policy, but in addition counselors are sent into the high schools to locate and interest prospective students in teacher training. Both programs make the selection at the freshman level.

Developing the Selection Program

Any school attempting to improve its selection procedure will be faced with the problems of where to begin and how to proceed. There are five tasks that will be faced.¹ Working agreements will need to be reached with respect to the competencies or characteristics a teacher should possess, the levels of competence to be required for admission, the evidence

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1. Maurice E. Troyer and Robert C. Face, Evaluation in Teacher Education, Prepared for the Commission on Teacher Education, American Council on Education, p. 45. Washington, D.C.: The Council, 1944.

that can be used to identify competence, the means to be used for gathering the evidence, and the interpretation that can be justified from the data gathered.

Increase in population and greater demand for education has necessitated a growing emphasis on selection programs. The number of studies made per year on the subject has increased rapidly since about 1925, and selection for instructor training has become more and more scientific. Under a plan of selective admissions, the least promising students are denied entrance into the educational institution or to the period of professional specialization within a curriculum. The professional curriculum may begin with the freshman year as in many state teachers colleges, or it may begin with the junior year as in many schools or colleges of education in universities. Selective retention is a plan for action after the student is in the curriculum or program. Each, without the other, has advantages and disadvantages and suitability may depend upon the institution and circumstances. To select or reject a student on the basis of test results of qualities desired in a teacher may not be a just procedure at the freshman level. The function of the professional curriculum is to develop these qualities. However, some students may be so low in certain qualities that the school does not feel it can afford to assume the responsibility of developing them enough to meet the required standards.

Factors of Selection

A review of numerous studies made in recent years reveals a general agreement that there is no one factor or trait upon which success in the teaching profession can be predicted. It is further agreed that it is possible to predict teaching success, to a degree, by consideration of a complex pattern of traits. However, there is disagreement as to the elements in this pattern. Such disagreement is understandable in view of the fact that what constitutes good teaching is not well defined. Another factor making for disagreement is that instructors in all fields do not necessarily need the same traits nor do they require all traits in the same strength. The sewing instructor does not require exactly the same traits as does the boys' physical education instructor. The lathe instructor in a vocational school will not require the same degree of certain traits that the history teacher in a high school should have. There are basic traits that all good instructors require, but there are others that will vary with circumstances.

Barr and Douglas,¹ in a study of ninety-nine teachers colleges using pre-training selection, found the frequency of the most popular items used as follows: scholarship, thirty-three schools; ability and aptitude, twenty-three;

1. A. S. Barr and Lois Douglas, "The Pre-Training Selection of Teachers," Journal of Educational Research, 28:100 (Oct., 1934).

character, twenty-five; health, twenty-one; English, twenty; psychological teaching aptitude tests, eighteen; physical examination, fourteen; personality, fourteen; and personal interview, fourteen.

A more recent study made by Eliassen and Martin¹ of forty-two articles and studies published between 1937 and 1939, found the most frequently considered traits were scholarship, health, personality, intelligence, speech and character.

In an investigation sponsored by the Delta Kappa Gamma Society,² Butler concludes that selection upon entrance to the instructor training institution generally includes personal interview, health examination and required freedom from physical defects, speech analysis and subsequent diagnosis of needs, and a standard of scholarship and native intelligence as evidenced by previous school work. Butler further concludes that in a continuing selection program, carried on during the professional preparation, the following factors are generally used: clinical help in speech when needed; confidence votes from faculty members at intervals; scholarship average; and cumulative records concerning

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1. R. H. Eliassen and R. L. Martin, "Pre-training Selection of Teachers During 1937-1939," Educational Administration and Supervision, 26: 481-92 (Oct., 1940).
 2. M. Margaret Stroh, Ida A. Jewett, and Vera M. Butler, Better Selection of Better Teachers, pp. 99-102. National Capital Press, Inc., Washington, D.C., 1943.

specific evidences of the student's ability to cooperate, assume leadership, carry responsibility, and to be a functioning contributor to a democratic society.

Selective Admission

The New York State Teachers College selection plan at the freshman level is based on a scale with eight major headings; personal appearance, social adaptability, enthusiasm, emotional qualities, breadth of experience, use of English, voice and diction, and speech defects. Psychological, reading, and English examinations are given the applicants first. At the same time they fill out application and personal inventory blanks. Character and personality ratings are secured from the applicant's high school principal. Later, health and speech examinations are given by college staff members; and finally the applicants appear at the school of their choice for personal interviews. The test results, with the exception of the physical examination, are weighted to give a final numerical index as follows: high school scholarship as evidenced by regents' examinations, four-tenths; intellectual ability and skill in English and reading, three-tenths; personality and speech, three-tenths. Factors affected by speech defects have recently been taken out of the rating scale because they are now considered the all or nothing type that the physical qualifications are. Personal interviews are held between the applicant and each of several staff interviewers. Finally, the health, speech, and interview

staff members meet in a body and discuss doubtful cases and make final selection. This plan, which has been developed in the past ten years, is considered successful by New York educators. About fifty-five percent of the applicants for admission to State Teachers Colleges in the State during 1940 were accepted.

It is interesting to note that Hagie¹ in 1933, from a study of seventeen instructor training institutions, concluded that selective admission interview techniques employed in most of the institutions studied could yield nothing but very unsatisfactory results. He also stated that personality factors were used in all schools studied. However, with two exceptions, all had begun using them in 1921 or later. His recommendations were, in part, that until such time as States would place all their problems of teacher preparation under a responsible head with authority to set up admission criteria and enforce standards, there would be no better way of selecting students than through a high school vocational guidance and counseling program. He also recommended that more emphasis be placed on evaluation of character and citizenship qualities in the selection process. The New York plan briefly outlined above would seem to be correcting the weaknesses of selection found by Hagie in 1933.

1. C. E. Hagie, Selective Admission to Teacher Preparation, pp. 10-11. Leaflet Number 39, United States Department of the Interior, Office of Education. Washington, D.C.: United States Printing Office, 1933.

Wayne University has developed a very extensive selection program at the junior level. Information, much of which is available from the two-year record of the student, is collected relative to academic aptitude and achievement, physical and mental health, personality and estimated success as a teacher. Academic aptitude is measured by the American Council on Education Psychological Examination. Academic achievement is judged by previous scholastic standing at the University and performance on a battery of tests including the Cooperative tests in English, General Culture, and Contemporary Affairs; the Stanford Achievement and Dictation Test in Spelling; and the Detroit Handwriting Scale. Data relative to state of physical and mental health are provided by physical examination, speech test, interview by a psychiatrist, and the Bernreuter Personality Inventory. Personality and probable success ratings are obtained from instructors, public school principals, the student's advisor, an officer of a social agency in which the student has been active, and if possible from a former employer. From all of these data a comprehensive profile chart is drawn of the student.

Summary

A selection program is a continuous process through which the least likely candidates are denied admission to the training program, or are eliminated as the program progresses. Cues may be taken from analysis of information,

collected in the process of selection for curriculum formation, guidance needs and methods, and need for further selection.

Some idea, concept, or understanding of who will be a good teacher, is a prerequisite to an efficient selection program. In the establishment or improvement of a program, the school should consider the following five items: the competencies or characteristics a teacher should possess; the levels of competence to be required for admission; the means to be used for gathering the evidence; and the interpretation that can be justified from the data gathered. Problems of selection vary with the institution and with time. It is, therefore, impractical to attempt to construct a standard selection system.

It is generally agreed that there is no one trait or factor from which teaching success may be predicted. It is believed, however, that such prediction can be made from consideration of a complex pattern of traits. Although the particular traits in the pattern are not agreed upon, the items most often considered are scholarship, health, personality, intelligence, speech and character.

Many types of selection programs have been devised, but each institution will have to form one through its own needs and characteristics. Once formed, the selection program must be constantly revised to fit current conditions.

Selection in the Navy

Selection of prospective instructors in the Navy is very similar to the university school of education junior year selection. There are some circumstances, however, peculiar to the Navy, which have important implications. The Navy man is usually a recognized expert in the field in which he will instruct before he is ordered to pre-service training. He is a rated man or commissioned officer with at least a few years of experience. He is not likely to have speech defects or other physical disqualifications because of the physical standards of the Navy. He will not consider himself a professional instructor because he is first a naval petty or commissioned officer. One very basic difference, which magnifies the importance of careful pre-training selection, is brought about by the fact that the Navy finances the training of the prospective instructor, pays him his salary while he is in training, and will pay in a number of ways for the resulting inefficiency of poor instructing if he is not competent. These conditions simplify some aspects of the problem and complicate others.

At the present time, most prospective instructors are being selected from personnel requesting instructor training and ultimate assignment to billets as instructors. Less than two per cent of the students, once they enter the instructor training school, are found unfit to be instructors and are returned to other duty. Requests for duty as

instructors by Navy personnel stem from several reasons. Some have a real interest in instructing, and some are interested in the academics of the field in which they desire to instruct. Often there is probably a desire for shore duty versus duty at sea. The Bureau of Naval Personnel Manual states that enlisted personnel may be recommended for duty as instructors through any of the following procedures:¹

1. All students of Class B and C schools are screened for suitability for duty as instructors. To be recommended as an instructor, each person must meet the following requirements:

- a. Be in the top third of his class, as determined by achievement in the school.
- b. Be recommended by at least two instructors for instruction duty.
- c. Be able to speak clearly.
- d. Show an interest in training and a desire to serve as instructor.
- e. Have a clear record.
- f. Have ability to exercise sound judgment.
- g. Demonstrate ability to work with others under supervision.
- h. Be military in bearing and deportment.
- i. Show evidence of leadership ability.

1. Bureau of Naval Personnel Manual, p. 227. Washington, D.C.: United States Government Printing Office, 1948.

2. Personnel on duty afloat, or at shore stations not under instruction, may make application to their commanding officers for recommendations as instructors. Commanding officers are enjoined to use great care in recommending candidates for duty as instructors. On forwarding requests for duty as instructors, the commanding officer states by endorsement whether the person is eligible as regards the following requirements:

- a. Must meet conditions c. to h. inclusive of the requirements listed in the paragraph 1 above.
- b. Must be either a petty officer, first class, or a chief petty officer in an appropriate rating. By appropriate rating it is meant a rating in the field in which the petty officer proposes to instruct.
- c. Must be professionally and technically qualified by instructor duty. A General Classification Test Navy standard score of fifty-five or higher is desired, but the Bureau of Naval Personnel will consider exceptions where candidates are otherwise exceptionally well qualified. A General Classification Test Navy standard score of fifty is equivalent to an I.Q. of one hundred.

3. All personnel graduating from a Navy instructor training course with passing marks are recommended as

qualified after fulfilling the general requirements of b. to h. inclusive of those listed in paragraph 1 above.

4. In the event of an emergency, civilian experience as a teacher may be considered adequate if technical competence in the subjects to be taught is considered sufficient. Each case should be decided upon its own merits.

A ready file of personnel qualified as instructors in accordance with the above provisions is kept in the Bureau of Naval Personnel.

To select or reject students in the civilian programs at the freshman level on the basis of qualities set down as those of a good teacher, might be unfair due to insufficient data on the student's traits at that time. This is not particularly true of the Navy instructor training school, because the man or officer has already spent several years in the Navy and has established a reputation and an official record. Herein lies the similarity of the Navy selection to that of the junior level selection. Furthermore, the Navy selection program is continuous in that at any time before, during, or after training, a man may be ordered to other duty if he is not considered a good prospective or competent instructor. In order to save time, expense, and embarrassment, the Navy selection program should be concentrated at the entrance to the professional training. To facilitate this, a file of data on the success or failure of graduates as instructors should be built up as rapidly as possible by the

Navy instructor training schools. Data which such a file would reveal, considered with records of the personnel prior to instructor training, might give correlations that will be significant in selection.

During the war the services developed a procedure of selection which earmarked good prospective instructors when they were in training of various kinds. The prospect was sent out to combat duty and eventually returned for reassignment. At this point his duty record was reviewed, he was interviewed, and if all factors were favorable, he was ordered to duty as an instructor. This procedure was considered very successful and has been carried over into peacetime use.

The items used for selection of Navy instructors are necessarily somewhat different in type and degree than those used by civilian instructor training institutions. For instance, military bearing is an important trait in the selection of an instructor for recruit training. Scholarship would be of much less importance. The Navy would find a similar difficulty in the use of civilian standard tests. Very few petty officers have had the general education that a civilian student entering his junior year would have. Also, the former may be far removed in years from the formal education he has had. However, the petty officer will have training, which is at least the equivalent of a trade school, and he will

be an older, more mature person than the average junior in college. As a consequence of these and other conditions, tests used in civilian institutions would have to be carefully selected for Navy use and in many instances would have to be altered to make them adaptable.

A standard instructor selection system for the Navy would be impractical. Due to Navy, domestic, and world-wide conditions, the need for schools and instructors fluctuates rapidly and widely. The desirability of instructing duty and, therefore, the motivation for Navy personnel to apply for instructor training, varies from time to time. The concept of who will make a good Navy instructor may be constant, but all other factors are subject to great variation. It remains for those administering the selection program to know the circumstances, the possible selection techniques, and to keep the program adjusted to the demands and conditions of the moment.

CHAPTER III

PRE-SERVICE TRAINING CURRICULUM

Introduction

The term "curriculum" has come into popular use comparatively recently. Curriculum denotes the total experience of the student under the guidance of a school. It includes not only the course of study, but also the action and reaction of persons, influences, and facilities in it. The term "course of study", as traditionally used, consists of a mere outline of subjects included in the curriculum.

The objectives of the professional education of instructors will be determined by the characteristics of the work for which the instructor is being prepared. The duration of the program and the facilities required will in turn be defined by the objectives of the program. The immediate objective of the curriculum in the professional education of instructors is to prepare a competent instructor who will have the knowledge needed to instruct, and who will cause the effect of action and reaction of his personality and background on a group, and their effect upon him, to be favorable to the instructing-learning situation. This will require an extensive period of preparation for the prospective instructor with opportunity to learn theory and to gain

practical experience. Although the length of the course is no criteria of its efficiency, the trend is toward a longer period of preparation, than was proscribed during World War II and since the war.

Because of the variations in type of work for which the instructor is being prepared, training programs vary widely from one institution to another and even sometimes from one field to another within an institution. However, there are basic requirements and procedures evident in all modern programs of professional training of instructors.

Curricula of teachers colleges, normal schools, schools of education, and the opinions of educators reveal an old but still evident conflict between theory and practice. Typical plans for the professional training of instructors are in the following sequence: The student is given basic courses in education, philosophy and principles of education, psychology, and the technique of instructing. Then, when the professional courses are completed, the student is given an opportunity to practice instructing. He attempts to apply the principles, skills, and techniques that he has learned in the actual teaching situation under expert guidance and supervision.

Curriculum Content

In a recent study of 490 cooperating colleges and universities, Doane¹ found that all except one of the institutions

1. Kenneth Ralph Doane, "A Study of the Professional Curriculum Requirements for the Preparation of High School

required the student to do some work in professional education. This means that students take one or more courses in educational theory, educational practice, psychology, or methods courses of the type that give students insight into the problems of teaching a particular subject. According to the investigation, the first eight most frequently required courses in order are student teaching, educational psychology, principles of teaching, general psychology, teaching of (the several subjects), principles of secondary education, introduction to education, and educational measurements. A majority of the schools required five or six separate professional education courses. The first five courses in this list are required by at least fifty percent of the schools.

There is a trend toward alteration of curricula toward courses of the practical nature and toward a better integration of the theory of professional education with practical work. A technique course, as a separate course, lends itself to abstraction and the prospective instructor is apt to be more interested in the academic subject matter than in the techniques. Furthermore, when the program later reaches the practice teaching stage, as pointed out by DeBoer,¹ the performance of student teaching activities, in school

Teachers in the United States," Journal of Experimental Education, 16: 86 (Sept., 1947).

1. John J. DeBoer, "Organizing the Program of Professional Education," Teachers for Democracy, The Fourth Yearbook of the John Dewey Society, pp. 256-89. New York: D. Appleton-Century Company, Inc., 1940.

situations only remotely or indirectly related to the program of study and discussion of professional problems provided by the instructor education institution, will probably be ineffective. In many instances, the student instructor's work is influenced or determined by the prevailing practices of the cooperating school, the established course of study, the opinions of the supervising instructor, or even the convenience of the administrator. Deboer concludes that in any case, when student observation and practice teaching do not function as closely related aspects of the theoretical work of the school or college, the result may be stalemate or confusion.

To alleviate this situation, many programs are being reorganized to an experience method of training instructors professionally, with emphasis on integration of courses. When theory becomes evident to the student in a practice situation, correlation is practically effected. The Milwaukee State Teachers College has a graduated plan of experience in observation, participation, and teaching provided continuously through the "professional year." Conference periods with faculty members are held during which students analyze problems in instructing and guidance in planning instruction. The Chicago Teachers College has a program divided into two parts. During the first phase, the student is given a course in education and psychology, utilizing public school situations for laboratory experiences. In the second phase of the

program, the student does practice teaching and takes part in a guidance seminar which considers problems of instruction. These are efforts, typical in schools today, to bring about better integration of the theoretical and the practical phases of training.

Practice Teaching

Student teaching is the most frequently prescribed course among colleges and universities, and it is ranked first in importance by certifying authorities.¹ The opinion of noted authorities in the field of education, and learned organizations and societies, are stressing the importance of integrating student teaching and other courses in the curriculum.

Practice teaching may be carried on in a campus school, a local public school, or in schools outside the immediate vicinity. Often that stage of the curriculum including practice teaching is held until the part of the program just prior to certification, it may be offered in the junior year, or it may be evenly distributed over a two-year or four-year period. There is also variation in the type of teaching situation experienced by the student. In some instances the student receives all of his practice teaching in one class in a single school. In other programs it may be distributed among several schools and grades. In recent times many institutions place their students in what approaches a full time instructing job.

1. Doane, op. cit., p. 92.

Practice teaching is a particularly valuable phase of the training curriculum because it may lend itself to a more objective appraisal of the student's ability and of the effectiveness of the professional curriculum. Troyer and Pace¹ state that there are three main purposes in evaluating practice teaching. One purpose focuses on the student, another on the situation in which the student teaching is carried on, and the third on the general and professional education which precedes, and which is presumably tested in, student teaching. In the first of these three questions, the degree of success or failure of the student, his weaknesses and strengths, and the progress he makes, would be considered and appraised. The question of the situation would include whether or not it gives the student instructor an opportunity for a wide variety of experience, to plan with others, to observe and study his students, and to see his program in relation to the total program of the school. The third purpose would have implications for the professional curriculum. It would reveal the strengths and weaknesses of the student's preparation prior to practice teaching and would indicate needs for further preparation. Only by consideration of all of these phases may a fair evaluation of student and curriculum be made.

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1. Maurice E. Troyer and Robert C. Pace, Evaluation in Teacher Education, Prepared for the Commission on Teacher Education, American Council on Education, pp. 226-229. Washington, D.C.: The Council, 1944.

Curriculum Planning and Development

Barr, Burton, and Brueckner¹ differentiate between improvement of a curriculum and improvement of a course. As they point out, improvement of the curriculum requires changes in many persons and factors operating within the setting for learning, while improvements of course materials and documentary aids to instructors, are only improvements in writing and editing materials which have been derived from instructional activities.

Curriculum planning and development and good instruction seem to be inseparable. Koopman² believes that every instructor should participate with learners in the derivation of effective instructing-learning policies, procedures, and units of instruction. This will lead to proficiency in curriculum planning.

Many factors, directly or indirectly, team together to make up and influence a curriculum. The student, instructor, school administrator, parents, society, political and economic conditions, specialists in education, organized lay groups, and many others will have a part in influencing the

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1. A. S. Barr, William H. Burton, and Leo J. Brueckner, Supervision, Second Edition, p. 393. New York: D. Appleton-Century Company, Inc., 1947.
 2. G. Robert Koopman, "Abilities of Teachers in Democracy's Schools," Teachers For Democracy, The Fourth Yearbook of The John Dewey Society, pp. 78-100. New York: D. Appleton-Century Company, Inc., 1940.

curriculum. Barr, Burton, and Brueckner¹ list the following seven principles governing a curriculum development program:

1. A dynamic leadership will accept from all sources suggestions leading toward initiation and development of curriculum programs.
2. An adequate process for achieving desired changes must be developed.
3. A functional organization and machinery will be developed.
4. The program will be based upon a geographic and administrative unit small enough to permit face to face contact, with provisions for necessary coordination among small units.
5. A balance must be maintained between gradualism and rapidity.
6. The necessary financial aid, material facilities, specialists, and adjustments on the loads of local participants must be arranged.
7. A program must justify itself through continuous evaluational processes and summaries thereof.

The curriculum is a process rather than a physical entity. It is dynamic and ever changing. The future instructor should have an understanding of this, for consciously or not, he will have a great influence on the curriculum in his school.

Curriculum evaluation² is discussed in Chapter V as a part of evaluation in instructor training.

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1. Barr, Burton, and Brueckner, op. cit., pp. 629-39.
 2. Infra, p. 44.

Curriculum Trends

Doane,¹ in his study of the curricula of 490 cooperating colleges and universities, certification requirements, and opinions of leaders in the field, concludes that there are the following nine trends evident:

1. There has been a continuous differentiation of the subject matter of professional education into more and more separate courses since universities began to prepare high school teachers. The courses seem to be the result of increasingly careful study of the teacher's job, the nature of learning and teaching, and the nature and needs of the child.
2. In recent years, there is increased interest in placing the significant topics of professional education into three or four large area courses. Through these, the whole complex act of teaching may be considered with reference to all the factors involved in teaching.
3. There is marked movement toward increased quantity of pre-service education. This includes academic, general, and professional types of training.
4. There has been growing concern for broadening the base of professional education for high school teachers in order to make them better qualified to teach in the modern high school of smaller communities.
5. Increased emphasis is being placed upon the development of professional competency of the prospective beginning teacher.
6. There is increasing appreciation of the fact that learning to teach is a continuous process which must extend into the in-service period. Teacher training institutions are devoting more and more attention to this type of training.
7. There has been a steady growth of popularity and emphasis on Student Teaching and actual classroom observation among institutions training high

1. Doane, op. cit., p. 93.

school teachers. Theory of teaching and education are coming to be more closely integrated with Student Teaching.

8. There is increased appreciation of the importance of personality improvement for the undergraduate. The teacher brings his whole being to his work, and he works as a whole person instead of a combination of academic, general, and professional segments.

9. Currently, the trend seems to be improve curricula rather than extend them in terms of college credits.

Summary

The term "curriculum" denotes the total experience of the student under the guidance of a school. Curriculum planning and good instruction are inseparable. The curriculum is dynamic and ever changing, and it is influenced by many and varied factors.

The eight courses currently considered the most valuable ones to the prospective high school instructor are student teaching, educational psychology, principles of teaching, general psychology, teaching (of the several subjects), principles of secondary education, introduction to education and educational measurements.

Evaluation of practice teaching has three main purposes; appraisal of student ability, of the practice teaching situation, and of the curriculum preceding the practice teaching. All three phases of the situation must be accomplished in order for any one phase to have much meaning.

Significant trends relative to the curricula of modern instructor training institutions are toward the following:

basing courses on careful study of the instructor's job, the nature of learning, and the nature and needs of the student; increasing appreciation of the fact that learning to teach is a continuous process which must be extended into the in-service period; a steady growth of popularity and emphasis on student teaching with better integration of theory and practice; and increasing appreciation of the importance of personality improvement in the student instructor.

The Navy Instructor Training Curriculum

Rose¹ states that the Curriculum and Instructor Training Section of the Bureau of Naval Personnel constantly provides new and revised curricula for Bureau of Naval Personnel Schools, and provides necessary instructor training for the personnel who will become instructors. The curriculum development is effected by one of the following methods: using the conference method at the Bureau, at the training activity, or both; having the curriculum prepared by the staff of a specific school, of an interested bureau, or a conference of both; sending representatives of the section to a specific school or schools to plan the curriculum construction; or by nominating representatives of specific training activities to make recommendations on or prepare the curriculum. This would seem to include those immediately concerned with

1. Homer C. Rose, "Curriculum Construction and Instructor Training For the Navy," Industrial Arts and Vocational Education, 36:315 (Oct., 1947).

instruction in curriculum development. The recently established Navy Instructor training schools at Norfolk and San Diego¹ offer the following four courses:

Service School Course.--This is a four-week course for all enlisted men and as many officers as possible who are being ordered from sea duty to duty as instructors in service schools and recruit training commands ashore. The curriculum includes lessons on factors affecting learning, how to study, planning instruction, instructional and job analysis, training aids, methods of instruction, shop planning and management, scheduling techniques, utilization of instruction sheets, testing techniques, and techniques of evaluating or measuring the quality of instruction.

Naval Reserve Officers Training Course.--This is a special four-week course offered in January and July of each year for enlisted personnel assigned to the Professors of Naval Science in the NROTC units located in fifty-two universities and colleges throughout the country. This course, although similar to the Service School Course, is supplemented by instruction on such topics as the organization and operation of the N.R.O.T.C. program, factors to be considered in living and working on a college campus, and correct relationships with college personnel.

Naval Reserve Course.--This is a two-week course to provide practical but intensive instruction for personnel

1. Supra, p. 7.

working with the Naval Reserve Training Program. The curriculum is the same as for the other courses except that it is condensed and is supplemented by instruction on special problems encountered in Naval Reserve Training.

Shipboard Training Course.--This course is offered to personnel assigned to operating ships. Although based on the same principles as the other courses, it places emphasis on in-service and on-the-job training.

The Navy school system has a strong advantage over civilian institutions in that curriculum formation or revision may be effected literally over night. When technological changes, personnel changes and demands, time elements, or other factors make sudden mandatory changes in training policy, form, or procedure, curricula may be formed or altered and ordered effective immediately. There is little or no tradition to cope with, and relatively little social and political pressure to overcome.

Item four of the principles governing a curriculum development program¹ states that the plan should be based on a geographic and administrative unit small enough to permit face to face comment, with provisions for necessary coordinations among small units. This principle will not be so readily applicable nor so necessary to the Navy as to a civilian school system. The Navy schools are widely separated

1. Supra, p. 35.

from their administrative headquarters in Washington. However, they are well integrated and the needs of the schools, the students they instruct, the problems they meet, and the subject matter they must impart is essentially the same throughout the Navy. There should be, and there is, allowed a certain latitude in curriculum revision and adjustment to fit local conditions, but essentials of the curriculum must not be altered without approval from the Curriculum and Instructor Training Section of the Bureau of Naval Personnel.

There are several characteristics that set the Navy instructor training school program apart as quite different from similar civilian institutions and it is interesting to note that Doane¹ listed some of them as curriculum trends. The Navy bases its courses on job analysis of the instructors' job. This is part of the trend to base courses on the result of increasingly careful study of the teachers' job, the nature of learning and teaching, and the nature and needs of the student. The Navy school program includes relatively little student instructing, but it places much emphasis on supervised instruction as one of the first steps of in-service training, and also on the fact that upon graduation from the pre-service school the instructor enters a second phase of a continuous training program. One of the stated

1. Supra, p. 36.

trends was that there is increasing appreciation of the fact that learning to teach is a continuous process which must extend into the in-service period. This continuation is particularly easy to effect in the Navy because both instructor training school and the field school are in the same organization. An attempt to cause better integration of theory and practice is made in the Navy program by having the new instructor observe expert instruction and do practice instructing under expert supervision in the specific field in which he will instruct. The trend is toward better integration of student teaching and the theory of teaching and education. It is not inferred that civilian instructor training will ever emphasize these phases to the extent that the Navy does, but it is significant that the Navy is using some of the techniques toward which civilian schools are moving.

CHAPTER IV

EVALUATION IN INSTRUCTOR TRAINING

Introduction

Evaluation is not a synonym for measurement. The process of evaluation includes quantitative analysis, but it goes much further in considering value. Evaluation of the educational process must be preceded by the establishment of definite objectives, and the objectives must be defined in terms of specific behavior which they imply. Sources of evidence which may be used in establishing the extent to which the behavior occurs must next be determined. The measurement must be taken, and finally the findings must be interpreted in the light of the established objectives. All too often, one or more of these steps is poorly done or is completely taken for granted. To accomplish its purpose, evaluation in education must include each of these steps.

Purposes

Evaluation in instructor training has, in general, six purposes. The first three of these are to provide a means of measuring the effectiveness of instruction, student growth, and curriculum. The last three purposes are to stimulate and point the way to improvement of instruction, student growth, and curriculum. These latter three are interrelated

so closely that evaluation of any one has implications for the others. Also, evaluation of any one involves, to a certain extent, evaluation of the others.

The lack of means of effective evaluation in some phases of the educational process is largely due to the failure to relate measurement to outcomes and the difficulty of inventing suitable appraisal techniques.¹ It is generally agreed that most present day tests measure only a narrow field of outcome. If the desired educational outcome limits are well defined, the task of measurement is much simplified.

Types of Evaluation

In the educational process there may be evaluation of the student by a teacher in a single course, evaluation of teachers by supervisors and administrators, evaluation by teachers of their own courses, evaluation by students or teachers of their own progress, and evaluation by any or all of these persons of total programs or major parts thereof. There is evaluation in a real setting and in an experimental setting. There is continuous and periodic evaluation. It may be seen that there are many types of evaluation programs, and although there may be different primary objectives in the various ones, all will have implications for the instructor training techniques.

1. A. S. Barr, William H. Burton, and Leo J. Brueckner, Supervision, p. 206. New York: D. Appleton-Century Company, Inc., Second Edition, 1947.

Evaluation of the Curriculum

It is seldom that evaluation of the curriculum can wait for proof of need for revision. The time lag is too great. Consequently, curriculum revision through evaluation is frequently effected on the basis of theory and job analysis. Follow-up studies are made from time to time and their results may be used effectively, however, the well planned evaluation program does not wait only for these survey findings.

One salient fact stands out in curriculum evaluation and its results. The curriculum is actually developed by the instructor in the classroom with the student. Unless the instructor takes an understanding of curriculum evaluation and revision into the classroom with him, its purpose will be lost. If the instructor presents the same lessons in the same old way, no amount of evaluation will be in any degree effective. It is generally agreed that for this reason, among others, the instructors should take part in the formal curriculum evaluation and planning programs.

The curriculum is a dynamic moving thing with some intangible aspects. This makes evaluation difficult. As the program changes, so must the process of evaluation be altered. Evaluation in an instructor training school is carried on informally every day. Anyone having an interest in the success of the school and its product, the student, the instructor, the school administrator, is an evaluator.

Barr and Brueckner list the following approaches through which the curriculum may be evaluated:¹

1. Analysis of the educational product as shown by tests, behavior records, interviews, questionnaires, follow-ups.
2. Analysis of learning products obtained from different curriculums experimentally compared.
3. Analysis of the degree to which the curriculum has been affected favorably or unfavorably by certain extraneous factors (legal requirements, fixed examinations, public pressures, research, tradition, social changes, professional leadership, and others).
4. Analysis of the general activities of teachers and of the use made of resources within the setting for learning.
5. Noting the effects of the curriculum program upon the professional activities of teachers, and upon the community.
6. Analysis of the methods used to develop a program of curriculum improvement.

Stanford University carried on a curriculum evaluation program in 1940 and 1941 which is described in part by McNaughton.² In the first stage, faculty reaction was obtained by personal interview as to objectives of the School of Education and of their own specific courses. Questions relative to school objectives were as follows:

1. What, in your judgment, are the outstanding strong points of the School of Education Program?

1. Ibid., p. 396.

2. Daniel C. McNaughton, "An Evaluation of the Teacher Education Program of Stanford School of Education," Unpublished Doctor's Dissertation, School of Education, Stanford University, Stanford, California, 1942.

2. What phases of the total program of the School of Education should, in your opinion, be examined with a view to improvement?

3. What is your tentative statement of the desirable general objectives for the Stanford School of Education?

Questions on specific courses were the following:

1. What are the objectives which you hope your students will accomplish in your course?

2. What experiences do you provide in your course in order to make possible the attainment of these objectives?

3. What methods of evaluation do you use to measure the attainment of these objectives?

The responses to these questions were then summarized for use in questionnaires. One questionnaire was made up of the strong and weak points of the school, and faculty members were asked to mark the relative strength or weakness of these points on a five point rating scale. The items considered were: philosophy of the faculty, resources of the University, student-faculty relationships, adaptability of program to student needs, realism of program, evaluation of results, the follow-up of graduates, effectiveness of practice teaching experiences, and changes produced in students.

A second questionnaire was made, similar to the first but concerned with objectives of the School of Education, in four sections for the faculty to mark. The first section asked for ratings of the functions of research, service to schools, preparation of teachers, and preparation of administrators and other educational workers. The second section

called for ratings of various activities within these functions. The third section asked for opinions on the patterns of education most suitable for the different fields of educational work, the fields being school teaching, administration, curriculum, personnel and guidance, and research. The fourth and last section was the main basis for polling opinions on objectives of the School of Education by indication of whether or not each objective listed was desirable and, if so, where the primary responsibility should be.

The third questionnaire was made up for students and consisted of six main groups of questions centered around why the student came to Stanford, the extent to which his purpose had changed, efficacy of the program in helping him achieve objectives, opinion of desirable objective for the School of Education, suggestions for improvement, and points in the program that were especially liked.

When the information from all of the questionnaires was analyzed and reviewed, it was found that several points had been achieved. General objectives were formulated which were acceptable to both the faculty and the students. The viewpoint of each had been considered. Specific objectives and evaluative procedures were listed for each course. Evidence from this study was considered with that of another evaluation technique, described in the next section, to give a more comprehensive picture.

Follow-up Studies

Another approach to curriculum evaluation is through the follow-up study. This is important to the instructor training institution, because it forces the institution to go beyond its own boundaries and to appraise its program in the light of the success or failure, strengths or weaknesses, of its graduates on the job.

There are several systems or techniques used in making follow-up studies although the questionnaire seems to be basic to most of them. Observation, interviews, and conferences are used to a certain extent, but usually graduates are so numerous and widely separated these methods are not practical. When circumstances do permit the use of these methods, it is good practice to use them for they are likely to illicit more personal interest and enthusiasm on the part of faculty members than the more impersonal questionnaire results. There are two major types of questionnaires. One seeks information relative to activities, behavior, or practices of a group under consideration, while the other inquires into the opinions of the group. Either of these types may take the form of a check list or an essay type questionnaire. The former type has the advantages of being concise and clear, it is easily and quickly answered, and it is simple to grade, classify, or tabulate. This is the best form for surveys of large groups although it will not give as much information about the individual as the essay type. The essay type

questionnaire is much more revealing, although responses will be uneven and the graduate may forget important items in the answer. Summarization of the essay type questionnaire is far more complicated than of the check list. It is frequently found that a combination of essay and check list types are most effective.

In 1941 Stanford University made an effective follow-up study to determine the effectiveness of its instructor education practices by finding out how well they had served the purposes for which they were planned.¹ The stated objective was that such an inquiry would make a material contribution to the objective of improving the instructor education practices at the University. The study was developed as part of the nation-wide study of instructor education sponsored by the American Council on Education. Three forms were used: The first went to Stanford graduates engaged in teaching to get from them an appraisal of their Stanford training. The second form was sent to employers and supervisors of these Stanford-trained instructors, requesting their rating of the instructors. A third form went to the same employers and supervisors to ascertain what items of pre-service training they considered most important in the selection of instructors. There was a 60.87 percent return of the first form,

1. Walter W. Isle, "A Study of Stanford's Teacher Preparation Services," Unpublished Doctor's Dissertation, School of Education, Stanford University, pp. 2-8. Stanford, California, 1942.

1,012 having been sent out. The second and third forms yielded returns of 60.7 percent and 50.3 percent respectively. The forms were all of the combined check list and essay type, carefully worked out by a committee, and definite conclusions were drawn up from the answers received. Such a study, although costly, may give the parent school an excellent insight into the strengths and weaknesses of its curriculum.

Evaluation of Student Growth

The professionally well-prepared instructor will evaluate student growth in terms of objectives and will share with students the responsibility of evaluating progress or achievement.¹ This emphasizes the fact that the student should share in the evaluation of his progress in the pre-service program, and of himself as a prospective instructor. Evaluating his program will help the student see more clearly the values, goals, and purposes, and it will, at the same time, assist the school in adjusting its curriculum to the student's needs. Instructor training institutions recognize this procedure as an important part of the prospective instructor's training. It is believed such evaluation by the student will help him develop the desire and ability to carry on planning in terms of his individual problems.

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1. John J. DeBoer, Organizing the Program of Professional Education, Teachers For Democracy, The Fourth Yearbook of the John Dewey Society, p. 274. New York: D. Appleton-Century Company, Inc., 1940.

Although an evaluation program may be continuous, there should be definite stocktaking stages in the evaluation of students. The College of Education at Ohio State University¹ has a program which is a continuous one, but five critical summarizing stages are evident: selection throughout the freshman level; selection of sophomore field experience; selection for junior standing, selection for student teaching; and selection for graduation. Such stages facilitate and insure clear cut and definite evaluation of the student at regular intervals.

There are many instruments being used for evaluation of the student. The traditional test, as the primary or only measuring device, is not now considered adequate. Tests, as the only measure of progress, may have an adverse effect on both learning and instructing, as both are likely to be pointed only in that direction. Standardized test scores are not necessarily an indication of teaching success or failure. Sandiford and others² in a summary of sixteen studies, found a median correlation of .26 between scores earned on professional tests and teaching success on the job. They also report a positive, but low, correlation between practice

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1. L. Roths et al., "Evaluation Program of Teacher Education," Adventures in Reconstruction of Education, p. 215. Ohio State University College of Education, Columbus, Ohio: The University, 1941.
 2. Peter Sandiford et al., "Forecasting Teaching Ability," University of Toronto, Department of Educational Research Bulletin No. 8, p. 26. Toronto, Canada: University of Toronto Press, 1937.

teaching marks and estimated success instructing. Yaukey and Anderson¹ summarized eleven studies and found a median correlation of .23 with a range of from .06 to .70 between marks earned in practice teaching and measures of teaching success.

Use of test results in evaluating student growth is necessary, but there are other important factors that must also be considered. The student acquires new attitudes, interests, understandings, and abilities that may directly influence his success as an instructor. Environment of the student should be considered. The environmental influences may be such that it is relatively easy or difficult for the curriculum to be effective.

An Evaluation Program of Student Growth

An interesting example of informal appraisal of student progress is that used at the State Teachers College in Troy, Alabama.² This school plan is selected as an example because it is a small school of several hundred students and its evaluation program is in the hands of the faculty, and not those of specialists. All students at entrance take physical examinations, an academic ability test, an English test, and

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1. J. V. Yaukey and P. L. Anderson, "A Review of the Literature on the Factors Conditioning Teacher Success, Educational Administration and Supervision, 19:513 (Oct., 1933).
 2. Maurice E. Troyer and Robert C. Pace, Evaluation In Teacher Education, Prepared for the Commission of Teacher Education, American Council on Education, pp. 117-22. Washington, D.C.: The Council, 1944.

fill out a personal data record. Results of these instruments are placed in individual folders and kept in the central counseling office. Soon after school has started, faculty members prepare brief summaries of the initial status and adjustment of students with respect to those objectives that have to do with personal, social, and emotional factors. A counseling program operates throughout the year and from this and faculty observation, anecdotal records are collected. These go to the student's faculty advisor. At the end of the term the faculty advisor writes a brief summary of the anecdotal observations and this is added to the student's personal record folder. At the end of the year the faculty judges student progress and development during the year. This is based on entrance test data, description of initial status, and the anecdotal records. In addition to this judgment, ratings are made at the beginning and the end of the year on a specially prepared rating form which calls for judgments on a six-point scale with respect to the following areas: health, personal appearance, social adjustability, meeting situations, use of leisure time, study methods and habits, communication of ideas, and personal economics. At the end of each quarter the students write summaries of their own progress. Included in this is a record they have kept during the year of their participation in college activities.

It will be noted that there is an absence of objective tests. This is possible because in the small school situation,

judgment may be more on the bases of personal acquaintance and observation. There is a cumulative record card in each student's folder containing objective tests of information, vocabulary, facts and principles; simple essay tests, midterm or final examinations, situation tests, problem-solving tests, etc.; self-written reports of field trips, special projects, activities, etc.; and ratings by teachers of various student reports, oral and written, reports on the use of the library, art products, music performance, appreciation, degree of participation in various activities. All ratings are recorded on a three point scale, three indicating that the student's performance falls in approximately the upper fourth of the class, two in the middle half, and one in the low fourth. The ratings at the end of the year are averaged.

An evaluation program such as this one has many advantages, and it may have some disadvantages. The plan, possible in a small school, makes for more personal instructor-student relationships and probably for better evaluation of student growth. However, it is often the case that a small staff working in close daily association, may be overinfluenced in their appraisal of students by personalities. It is to guard against this possibility that personal and impersonal evidence of growth are kept separate in the student's record. It is generally agreed that even the most closely knit staff needs some systematic guide for observation and appraisal of students. This plan furnishes such a guide.

Evaluation of Instructor and Instruction

Evaluation of instruction is particularly important to the instructor training institution, because instructors usually instruct as they have been instructed.¹ Therefore, the techniques of instruction should be exemplary in such an institution. In a sense, the measure of efficiency of instruction may be a rough measure of the prospective instructor's future success, at least during his first year.

There is one aspect of evaluation of the instructor that is repeatedly emphasized by experts on the subject. The evaluation process must not be used on the instructor, but rather with the instructor. Then, and then only, can the most be gotten out of the process.

There are several approaches to measurement of the efficiency of instruction: through evaluation of the instructor's contribution to the learning-instructing situation by actual observation; through evaluation of student progress; through tests of the instructor for qualities associated with instructing success; and through test of the instructor for mental prerequisites to instructing efficiency.

Sandiford and others² made a study of the judgment of teaching success. Using the Spearman-Brown formula, they

1. Frank E. Baker and Ernest O. Melby, "The Status of Teacher Education In America," Teachers For Democracy, Fourth Yearbook of the John Dewey Society, p. 27. New York: D. Appleton-Century Company, Inc., 1940.
2. Sandiford et al., op. cit., pp. 78-9.

obtained reliability coefficients of .888 and .929 respectively for the average ratings of two groups of experts and of .945 and .899 respectively for two groups of other judges. Correlations between the ratings were .748 and .707 respectively. This would indicate that the judgment of experts is a fairly good criterion of teaching success.

Pupil achievement, as a criterion to teaching success, is not very good because the outcome of education is wide and difficult to define. In a study concerned with the relationship between a group of ten measures of teaching ability and pupil achievement, Barr and others¹ obtained uniformly low coefficients of correlation.

The Ohio Teaching Record

The Ohio State University has developed what it calls the Ohio Teaching Record for evaluation of instruction.² It is emphasized that this instrument is used with the instructor or student instructor, and not on them. The first edition of the Record was made up of a series of questions concerned with the procedures used, the mechanics of teaching, meeting pupil needs, democratic aspects of teaching-learning situations, and the personality of the teacher.

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1. A. S. Barr et al., "The Validity of Certain Instruments Employed in the Measurement of Teaching Ability," The Measurement of Teaching Efficiency, p. 139. Edited by Helen M. Walker. New York: The Macmillan Company, 1935.
 2. Troyer and Pace, op. cit., pp. 184-5.

In the second edition these items were the same except that the one on procedures employed was made more specific and became two topics; procedures relative to pupil-instructor planning, and objectives guiding the instruction process.

In the third edition, two new headings were introduced; the questions of what was done to promote better school-community relations, and what evidence was there of specialized training in this area. Also, in the third edition, the first four questions formed a sequence that can be summarized as materials, purposes, methods, and effectiveness, and served to focus attention more clearly on what was originally included under the two headings of procedures employed and mechanics of teaching. Finally, sections on the instructor's personality and on pupil-instructor planning, which were in the first and second revisions, were eliminated. These topics were accounted for in the final revision under other items. The major items in the latest revision are materials, purposes, methods, effectiveness, pupil problems, community, democracy, and special area. This instrument is considered successful by The Ohio State University and has been modified by other schools to fit their particular needs.

Student Evaluation of the Instructor

The University of Washington has instituted a program of student evaluation of its instructors. The students are asked to fill in blanks on a form with the names of five

instructors they have worked under in University courses, one of whom they consider outstanding, one superior, one competent, one only fair, and one whose teaching is of slight value. The particular instructor being rated is not included as one of these five. The student then compares his instructor with the five teachers he has just listed. Rating is made in five instructor qualities on a numerical scale from one to six. One is considered better and six poorer than any one on the list. The five qualities listed for consideration are as follows: (1) clear and understandable in his explanations; (2) takes an active, personal interest in the progress of his class; (3) is friendly and sympathetic in manner; (4) shows interest and enthusiasm in his subject; and (5) gets students interested in his subject. The student then has an opportunity to write in his own words general comments of the instructor's teaching. The survey is made and abstracted by a representative of the Office of the Executive Officer in charge of Academic Personnel. Average ratings on each trait and the average sums of all ratings are furnished the instructor together with a comparison with faculty norms. The instructor is also furnished a list of the student comments with the frequencies of each comment noted.

Guthrie¹ makes the following comment relative to the reliability of the student ratings:

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1. Edwin R. Guthrie, "Evaluation of Faculty Service," Bulletin of the American Association of University Professors, Vol. 31 (Summer, 1945), pp. 258-9.

A preliminary determination of the reliability of the student survey was made by asking the students in two large classes to fill out the blank for each of their four or five instructors during the preceding term. This furnished ratings on 46 instructors.

Reliability was determined by pairing student ratings and calculating the correlation.

The first trait, knowledge of the subject, gave r equal 0.05, which was interpreted to mean that students had been asked to estimate something of which they had very inadequate knowledge. On traits 2, 3, 4, and 5 the correlations were, in order, 0.39, 0.33, 0.34, and 0.30.

By eliminating the score on trait "one" and summing the scores on the other four traits, total ratings on a single individual were used, a correlation of 0.42. This was a very satisfactory figure because it indicated that the average of twenty student ratings would have a reliability of 0.93. In other words, the average opinion of twenty students is a highly stable and dependable measure which another group of students may be expected to approximate very closely.

Ultimate judgment of an instructor is formed by the use of the student ratings plus faculty judgments of each other. The latter have about the same consistency as the student judgments of faculty teaching. It is important that the plan originated from a faculty questionnaire and additions and alterations are made from faculty suggestions.

Instructor Self Evaluation

Self evaluation for the instructor is as important as it is for the student instructor, and for nearly the same reasons. There are five general types of rating scales in use by teachers in self evaluation of efficiency of

teaching.¹ These five are as follows: point scales listing qualities associated with good teaching which have been weighted; graphic scales which are similar to the point scales except that the representation is graphic; diagnostic scales which organize the point scale in such a way as to reveal levels of achievement; quality scales which depict different degrees of teaching merit, each described in terms of its characteristics, aims, methods, and procedures; and conduct or performance scales which attempt to measure teaching, not teachers, in terms of standards of pupil performance. Each of these types has its limitations and many schools have found that several types may be combined for more effectiveness.

Summary

The process of evaluation is a continuous one involving quantitative analysis and consideration of value. For effective evaluation in the educational process, there must be included the following six steps: establishment of objectives, definition of objectives in terms of specific behavior which they imply, determination of sources of evidence which may be used in establishing the extent to which the behavior occurs, measurement taken, and the findings interpreted in the light of the established objectives.

1. James Harold Fox, Charles Edward Bish, and Ralph Windsor Ruffner, School Administration, Principles, Procedures, The George Washington University, The School of Education, Washington, D.C., pp. 49-50, 1947.

Evaluation in instructor training provides a means for measuring the effectiveness of instruction, student growth, and curriculum, and it points the way to improvement of all three. Evaluation in some phases of the educational process is sometimes ineffective because of failure to relate measurement to outcomes and the difficulty of inventing suitable appraisal techniques. Most testing measures only a narrow field of outcome.

A curriculum is actually developed by the instructor in his classroom with the student, and curriculum evaluation and revision is only as effective as he makes it. To give the instructor an understanding of curriculum evaluation, thus making the resulting revision more effective, he should participate in the procedure. It is impractical to attempt to construct a standard curriculum evaluation program, because the curriculum is dynamic and as it changes, so must the technique of evaluation.

The follow-up study approach to evaluation of a school program has the distinct advantage of forcing the institution to go beyond its own boundaries for appraisal.

The professional well-prepared instructor will evaluate student growth in terms of objectives and will share with students the responsibility of evaluating progress or achievement. Evaluating his program will help the student see more clearly the values, goals, and purposes, and it will assist

the school in adjusting its curriculum to the student's needs. A good program for student growth evaluation will include appraisal of personal, social, and emotional factors as well as academic ability.

Evaluation of instructor and instruction are particularly significant in the instructor training institution. Instruction here should be exemplary because instructors tend to instruct as they have been instructed. Evaluation techniques should be used with the instructor rather than on him.

Measurement of the efficiency of instruction may be approached through evaluation of the instructor's contribution to the instructing-learning situation by actual observation, through evaluation of student progress, through tests of the instructor for qualities associated with instructing success, and through test of the instructor for mental prerequisites to instructing efficiency. It is generally agreed that the judgment of specialists is the best criterion of teaching success, and studies have shown that pupil achievement, as measured by tests, is not a good measure. Instruments considering many aspects of the instructing-learning situation are used in evaluating instructor and instruction with some success.

Evaluation in Navy Instructor Training

In the course of the Navy one month instructor training program, it would be impossible to use programs of evaluation

approaching the complexity and comprehensiveness of most civilian programs. This is particularly true of evaluation of student growth. Ultimate evaluation of the instructor training school program is made by the Curriculum and Instructor Training Section of the Training Division in the Bureau of Naval Personnel. Members of this section make frequent trips to the field activities in the capacity of consultants and advisors. They keep the field activities informed of policy and developments, make recommendations for improvements in instruction and the administration affecting instruction, and carry on a continuous evaluation of them. However, the instructor training school must have evaluation techniques to fit its immediate needs.

Curriculum evaluation and revision may originate in the instructor training school, but approval for significant changes must come from the Bureau. The follow-up study could be used to great advantage. Many schools are in the immediate vicinity of the instructor training schools and the conference, observation, and interview techniques may be easily used.

Evaluation of student growth will be difficult in the training institution except by objective testing. However, consideration of records of past performance, observation for one month, and objective testing, should give a reasonably sound basis for judgment of probable teaching ability.

A program of student self-evaluation could be started that would carry over into in-service training.

Much has been written by the Curriculum and Instructor Training Section on supervision and observation of instruction. There has recently been published a guide for observation of instruction. It is prepared for use of supervisor and instructor together and covers points coming under the general headings of student response, instructional techniques, personal characteristics, and physical aspects of classroom, shop, or laboratory.

CHAPTER V

IN-SERVICE TRAINING

Introduction

In-service training, as used in this study, is that part of the total supervisory program which is concerned with the growth of the members of the school staff which will assist them in carrying out the specific and immediate duties and responsibilities assigned to them. In-service training might well be called the expedient aspect of supervision. Supervision also has the more encompassing responsibility of total growth of the school staff to develop potentialities and growth toward possible promotion.

Anderson¹ lists four essential bases for effective in-service training. First, the instructor should develop an inclusive outlook on the role of the school in modern society. He should understand the school in its social setting. All too frequently, curricula have as their primary function the transmission of race heritage rather than development of the learner. Second, the instructor must gain an understanding of how learning takes place. This should be

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1. Walter A. Anderson, "The Continuing Education of Teachers in Service," Teachers For Democracy, The Fourth Yearbook of The John Dewey Society, p. 301. New York: D. Appleton-Century Company, Inc., 1940.

through not only printed material on the subject, but also through observation and study of the learning process. Third, to promote effective instruction and administration of the school, in-service training is necessary. If instructors are trained and instruct in an autocratic atmosphere, they are likely to follow the same system with their students. Also, to effectively carry out administrative policy, the instructor must have a sympathetic understanding of the policy and its aims. Fourth, the instructor should recognize, study, and apply scientific procedures in his instruction. Teachers must grow professionally if their instruction efficiency is to increase. The instructors pre-service training may have consisted largely of "listening," and very little "doing." He may, therefore, be in a poor position to cope with some of the practical situations he will meet on the job.

It is generally agreed that the local school system is responsible for the administration and direction of in-service training; however, it is also agreed that the instructor training institution should take an active part in facilitating on-the-job instructor growth toward better instruction. The pre-service training school should be alert to new opportunities to serve the field, should actually send faculty members into the field to act as consultants, and should make available library and laboratory facilities for the study of problems in the field.¹ This will benefit the

1. Ibid., p. 313.

training institution, as well as the school in the field, by giving the former an insight into the current problems of the schools and the instructors.

Types Of In-Service Training

There are many instruments of in-service training, the first of which, with respect to time, is the induction program for new instructors. Such a program should acquaint new instructors with the school organization and policies, the duties and responsibilities that will be theirs, information about the students, the materials and facilities of the school, social activities, and other items affecting him personally.¹ A definite plan for such a program should be made and carried out by the school administrator. He can and should call on staff members, especially experienced instructors, for assistance in both the drawing up and operation of such a plan, but he personally should retain the responsibility and initiative. A well planned and well executed induction plan gives the new instructor essential information, improves his morale, and increases the possibility that he will take on his instruction duties with self confidence and efficiency.

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1. James Harold Fox, Charles Edward Bish, and Ralph Windsor Ruffner, School Administration, Principles, Procedures, p. 146. The George Washington University, The School of Education, Washington, D.C., November, 1947.

Prall and Cushman¹ made an exhaustive study of in-service training in the forms of planning bodies, school policies councils, study groups, school system workshops, curriculum development groups, personnel study groups, related school system cooperation groups, and community problems study groups. The planning bodies studied by these authors were made up of representative administrators and instructors from the several schools in a school system.² These agencies planned in-service training for the school system and it is significant that classroom instructors were included. The primary function of the planning committee was planning of efforts toward continued growth of the professional personnel; however, attempt was made to get away from the ad hoc type of committee. The key concept of an in-service program as developed by these bodies was that the working groups in the school system were held together by a central committee. A second concept was that such a program must begin with tasks which are practical and immediate.³

School policies councils groups, made up of administrators and instructors again, dealing with administration of

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1. Charles E. Prall and C. Leslie Cushman, Teacher Education In Service, Prepared for the Commission on Teacher Education, American Council On Education, Washington, D.C., 1944.
 2. Ibid., p. 32.
 3. Ibid., p. 93.

policy and the making of policy recommendations to the school superintendents.¹ This system of in-service training draws together the policy making and policy administration agencies. The instructor administers policy in his classroom and the principle effects his administration through and with his instructors. It would, therefore, seem logical that the instructor should have some voice in the formation of policy that effects him. There are various methods and forms of operation of school policies councils to choose from, depending on the characteristics of the school or school system in question.

The Study group is the form of in-service training most commonly used, and in the Prall and Cushman² study, it is the type functioning within the central planning committee. Study groups are generally organized for professional improvement of the instructors, for better coordination of their efforts in instruction, or for effecting action on some specific issue. It is a means of improving human relations not only within the ranks of the school, but also with lay groups by inclusion of lay personnel in the study group. It is generally agreed that participation should be voluntary.

The workshop technique of in-service training is in many respects similar to the study group. It is made up of a

1. Ibid., p. 100.

2. Ibid., p. 145.

collection of study groups, is of scheduled and short duration, and is usually organized for a specific purpose. It is most frequently used by the school system, association, or other network of schools. The use of the term "workshop" in this sense was first applied to a summer study organized by the Progressive Education Association in 1936.¹ Since that time the use of the workshop and its popularity has grown rapidly. It may be organized to consider felt needs or to stimulate and broaden horizons. Generally, if it does the first, it will do the other.

The curriculum development, personnel study, cooperative, and community problems study groups are similar to those already described, but with more specific aims. From the study of examples of these forms of in-service training, Prall and Cushman² conclude that the most successful ones were conducted in response to relatively specific needs which were felt by the participants; the predominant form was group activity; the focus of attention was generally on the instructor's job rather than on the instructor; and the instructor growth that resulted could be regarded as incidental to the main purpose of performing their tasks more effectively.

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1. Kenneth L. Heaton, William G. Camp, and Paul B. Diederich, Professional Education for Experienced Teachers, p. 3. Chicago: University of Chicago Press, 1940.
 2. Prall and Cushman, op. cit., pp. 439-40.

The use of consultant services is widespread. Consultants may be used as observers and lecturers or as participating members of workshops, study groups, committees, or other working units. Troyer and Pace¹ point out that in the former it is far more effective for the consultant to visit the school for a day and lecture the instructors afterward, than it is to dismiss school for the day and have two lectures. The probability is much greater that the lecture will be practical and geared to the problems of the specific school. Using a consultant as a participant in a working group is much more effective although more expensive and time consuming.

In addition to the in-service training instruments mentioned above, there are the more simple bulletins, conferences, and lectures. Although less effective than the more elaborate group activities, they may play an important part in keeping the instructor abreast of the times and informed of possible solutions to his problems.

The instructor training institution takes part in in-service training through what might be called cooperative field service. One fact stands out in a review of present day pre-service training institution field services: There is no single formula of service. There is no set pattern

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1. Maurice E. Troyer and Robert C. Pace, Evaluation In Teacher Education, p. 54-65. Prepared for the Commission on Teacher Education, American Council on Education, Washington, D.C., 1944.

for request for services, nor one for giving assistance.

Some projects, such as workshops, may be properly initiated by the instructor training school. In some instances the initiative will be taken in the field. There are three common means in which the instructor training school enters into in-service training.¹ The first is through bulletins, or other means of communication, in which information relative to new developments and the results of studies are sent out into the field. The second is provision of experts who will cooperate with local staffs in analyses of local needs, defining needed adjustments, in setting up experiments, and in curriculum planning, evaluation, and revision. The third is through organizing and presenting lecture series relative to problems of the specific school or school system for which they are given. Here again, the keynote of success in such ventures, seems to be that the in-service training must be integrated with related local activities and must be pertinent to the local problems in education.

Visitation as an in-service training technique is not accepted by some educators as desirable. However, if properly supervised, some schools use it to advantage. Visitation may take the form of merely taking weak instructors to visit a class conducted by an excellent instructor, or instructors may visit other schools primarily to see what they are doing.

1. William S. Gray, Preparation and Improvement of Teachers, p. 52. Evanston, Illinois: Northwestern University, 1933.

When visitation is impractical, motion pictures that take the instructor to other classrooms may be substituted.

Summary

In-service training is concerned with the growth of members of the school staff which will assist them in carrying out the specific and immediate duties and responsibilities assigned to them. Because it is frequently the case that new instructors have received much pre-service training in theory and little in practical work, they may need assistance on the job. It is generally agreed that the responsibility for in-service training rests on the local school or school system, but the instructor training school should assist in this work. The local school can benefit from the training school facilities and expert consultants present in such an institution, while the training school can gain an insight into the current problems in the field.

The induction program is an important means of starting a new instructor in his job. It should be planned and executed by the school administrator personally. Some of the group forms of in-service training are planning bodies, school policies councils, study groups, school system workshops, curriculum development groups, personnel study groups, related school system cooperative groups and community problems study groups. To be most effective, these programs must be conducted in response to relatively specific needs

which are felt by the participants; the predominant form would be group activity with instructor and administrator representation; and the focus of attention should generally be on the instructor's job rather than on the instructor.

Consultants are often employed as observers and lecturers, or as active participants in working groups. Other forms of in-service training frequently used are bulletins, conferences, and lectures.

The instructor training school takes part in in-service training through cooperative field service. Information relative to new developments and the results of studies are sent to the field, experts on the training school staff go into the field to give assistance, and lecture series are organized and presented to assist schools or school systems with their local problems.

In-Service Training in Navy Schools

A study of civilian in-service techniques of training instructors is of great importance to the Navy, primarily because all may be applied in the Navy school system with little or no alteration. The Navy instructor's need for in-service training would seem to be even greater than that of the civilian, because his professional and pre-service training is a short one month course, and in many instances he does not have an extensive general education. The Navy instructor is an expert in the subject matter field in which

he instructs, and this would make up for much of the lack of general education in the eyes of the vocational educator, however, the Navy recognizes the need for in-service training and placed great emphasis on it during the war.

The four essential bases¹ for effective in-service training may be paraphrased to fit the Navy. First, the instructor should develop an inclusive outlook on the role of the school in the Navy. He should know what the mission of the school is and its place in the local organization. Second, the instructor must gain an understanding of how learning takes place. He should constantly strive to improve his teaching technique. Third, to promote effective instruction and administration of the school, the instructor should have a sympathetic understanding of the administrative policy and its aims. Although the school is a part of a military organization, many democratic practices are apropos. Fourth, the instructor should recognize, study, and apply scientific procedures in his instruction. The Navy instructor's pre-service training is short and lacking in practical experience and learning of theory. He should, therefore, accept any theoretical or practical expert advice offered.

The practice of sending instructors from the instructor training school into the field is even more appropriate in the Navy than in the civilian school set up. All of the Navy schools are in the same "school system." In a particular

1. Supra, pp. 69-70.

area, instructor training schools and other schools will even come under the same Commanding Officer. Although the local schools may still be responsible for their in-service training, the relation between them and the instructor training school can be very close.

The facts that Navy instructors are not professional teachers, and many have not had previous experience as an instructor in an organized school, greatly enhance the importance of the induction program. All of the advantages of such a program in a civilian school situation may be realized in the Navy school. Planning bodies, school policies councils, study groups, school system workshops, curriculum development groups, related school system cooperation groups, and community problems study groups, all may be used to advantage in the Navy. The last named, community study groups, is particularly applicable. The Navy school should systematically and periodically review the Navy community, and the place its graduates will take in that community, in order to more effectively point their instruction toward solution of the problems involved.

After the prospective instructor has finished the instructor training four-week course and has been assigned to a school, he enters the second phase of his training. The officer-in-charge of the school and his supervisory personnel, have the responsibility of giving further in-service

training. This usually consists of allowing the new instructors to observe one of the more experienced and skilled instructors conduct classes in the type of work he is to instruct. Then the new instructor is given a light instructing load and is observed and guided by a supervisor who has a sound knowledge of the subject and practical teaching experience in the specific subject. The Bureau of Naval Personnel Manual makes the following requirements relative to in-service training:¹ Commanding Officers of training activities shall comply with the following procedure when indoctrinating, supervising, and designating "qualified instructor" personnel:

1. Each newly received instructor shall be provided a probationary, in-service, indoctrination period of three weeks to include:
 - a. A minimum of ten hours formal training in the techniques and methods of instruction.
 - b. A minimum of five hours spent in the observation and evaluation of qualified instructors.
 - c. A minimum of five hours supervised practice teaching of the candidate's teaching specialty.
 - d. A minimum of ten hours practical work in the preparation of lesson plans, job sheets, etc.

1. Bureau of Naval Personnel Manual, p. 287-3. Washington, D.C.: United States Government Printing Office, 1948.

e. The balance of the three weeks in research on technical subjects and in review of available training materials and aids related to the instructor's teaching specialty.

2. Each newly received instructor shall be continued on a probationary status for three months under supervision, progress being recorded on a standard instructor evaluation sheet at least every three weeks.

3. After three months satisfactory performance the probationary status may be terminated. Further training and continuous supervision of instructors are to be carried out by the commanding officer to the end that high standards of instruction are maintained.

4. An instructor who is considered unsatisfactory at the end of four weeks or at any time thereafter may be transferred by obtaining authority from the Chief of Naval Personnel. Such action should not operate against the person's service record except for negligence or indifference to duty in which event the commanding officer should make appropriate entry in the service record.

5. Commanding officers of training activities shall assign the appropriate instructor Navy job classification code as a secondary code and place the entry "qualified instructor" in the service record of each individual who has completed a period of one year as instructor and who has demonstrated satisfactory ability as such. The purpose of

this entry is to assist commanding officers in placing the person in the command's shipboard training program upon his return to sea duty.

The Navy has made wide use of consultant services in training during and since the war. Consultants are usually attached to the Training Section of the Bureau of Naval Personnel, are recognized experts, and are likely to have a broader understanding and outlook on training than the local school administrator or instructor. The services of the consultants and the Training Section of the Bureau of Personnel have to a large extent taken the place of the services of the instructor training schools to the field.

The instrument of visitation has been used in several fields by the Navy for many years. Observing parties, which are sent from their own ship to another as umpires for gunnery exercises, have several functions, one of which is to see what others are doing. The same aim is one of the purposes of regular inspection parties. This instrument, long used by the Navy, might well be used as an in-service training technique in Navy schools.

CHAPTER VI

INSTRUCTOR TRAINING AS VOCATIONAL EDUCATION

Introduction

Man is educated primarily to facilitate adjusting himself in human society and to enable him to get along with his fellow men. One phase of formal schooling to accomplish this is general or liberal. It includes transmission of our social heritage to the student, training in some of the arts and crafts, development of the ability to think for himself, and education in other fields that will facilitate living a useful and successful life. It is generally agreed that training to earn a living, often referred to as vocational education, must be specific and to the point if it is to be effective. If the high school student takes a course in typewriting, it will not necessarily qualify him for employment as a stenographer. He will need to be trained in the various duties of that specific job. Vocational education may train the student to expertly operate the acetylene torch, and his general education will teach him to use the skill in manufacturing automobiles rather than in opening safes. Thus, general and vocational education are complementary phases of preparing the individual for a successful life.

Each individual in our modern society plays many different roles. One person may simultaneously play the part of husband, father, neighbor, member of a fraternal order, carpenter, union member, Sunday School teacher, home owner, and many others. In order to act successfully in these many roles, different phases of his education, formal and informal, must have slightly different aims, and will, perhaps, have to be conducted in slightly different ways.

Goals Revealed in Evaluation

The aims or goals of general and vocational education are revealed in their evaluation, and they are strikingly similar. Magill¹ states the following concerning the evaluation of vocational education: "Objectives which should dominate the vocational education program are revealed in these questions: (1) How effectively are the graduates of the program contributing to the social welfare? (2) How happily and successfully are they adjusted to life? Morrison,² in explaining that general education is adjustment and preparation for right living, writes that general education gives the personality and capacity for getting on better in the presence of an ordered universe and for contributing to the

1. Walter H. Magill, Administering Vocational Education, p. 106. Minneapolis: Educational Publishers, Inc., 1941.

2. Henry C. Morrison, Basic Principles in Education, p. 365. Chicago: Houghton Mifflin Company, 1934.

evolution of a society in which all can find peace and well-being. These two statements of value are essentially the same.

Instructor Training

Instructor training prepares and qualifies the student for a specific profession or vocation. Although a large amount of general education may be necessary in the preparation, it may be classed as vocational education. Mallary¹ makes this statement on the subject:

It has been difficult for the teacher-training institutions to appreciate that teaching is a gainful occupation and their work is primarily that of vocational education. As such, all the standards that may be applied to vocational courses can properly be applied to teacher-training courses. The qualifications set up for an instructor in poultry raising or plumbing can properly be applied to the trainers of these teachers. The content embodied in teacher-training courses can be judged by the same standards, as to its functioning or nonfunctioning character, as would be used in determining the value of this content in any vocational course. From the realistic viewpoint the same measures for determining effectiveness should be equally applicable to the trade school and the teachers college.

Mallary² is even more specific in listing the following eight fundamental characteristics of an efficient vocational program for training of instructional and supervisory personnel:

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1. Benjamin H. Mallary, Vocational Teacher Training: Its Development and Present Trends, "Objectives and Problems of Vocational Education," Second revised edition, pp. 210-11, Edwin A. Lee, Editor. New York: McGraw-Hill Book Company, Inc., 1938.
 2. Id., p. 223.

1. The training should be given to selected groups of qualified individuals.
2. The subject matter of the course should be pre-determined by a job analysis of vocational teaching so as to function directly in the training.
3. The teacher trainer should have had practical experience as a vocational teacher.
4. Individual instruction should be given to insure that the progress of each trainee will be determined by his or her ability to earn promotion by doing the work required.
5. The training program should be set up on the basis of the most effective order of learning.
6. The training should be based upon the prevailing occupational standards of vocational schools and classes and should take place in the atmosphere and environment of a real teaching job.
7. The content of the related subjects of the training course should be determined by a deeper, more penetrative analysis of the teaching job rather than academically derived.
8. There should be evidence of professional competence in the various instructional skills before full employment of the trainee as a vocational teacher.

These principles, listed by a vocational educator, are in close agreement with those of instructor training institutions. It was pointed out in the section on curriculum¹ that educators and training schools throughout the country are in agreement that more emphasis should be placed on student teaching, the practical phase of pre-service training. It is also generally agreed that curricula in instructor

1. Supra, p. 37.

training schools are being altered as the result of increasingly careful studies of teachers' jobs, the nature of learning and instruction, and the nature and needs of the student.¹ Furthermore, it is agreed that a better integration of theory of teaching and education with student teaching is an essential.² These trends in instructor training are toward the principles listed by Mallary.

General and Vocational Education and the Navy

Navy schools are not in competition with civilian institutions of learning. When an individual enlists or is commissioned in the Naval Service, the Navy assumes that he has a certain amount of general education. Present policy is to solicit enlisted recruits from the ranks of high school graduates and officer personnel from the college or university graduate level. A concerted effort is being made by the Navy to induce personnel planning to join the service, and those already in the service, to gain a general education. The Navy viewpoint is stated in the United States Navy Occupational Handbook³ as follows:

The Navy encourages young people to stay in high school, graduate and go on to college if they can. It also urges them to plan their careers as early as possible; then work toward

1. Supra, p. 39.

2. Supra, p. 39.

3. United States Navy Occupational Handbook, p. v. Washington, D.C.: Bureau of Naval Personnel, 1948.

the realization of their ambitions by taking subjects and obtaining experience which will contribute to their chosen field of work. The Navy follows this policy because it is convinced that young people will serve themselves and their country better by obtaining the maximum of educational background before launching upon their life work.

While no specific amount of education is demanded for joining the Navy, it is obvious that a good education will contribute to the effectiveness of those who work in a vast technical organization which demands trained men to operate its units afloat, ashore, under the sea and in the air. It should be remembered, of course, that many young men do not care to study difficult subjects. There is a place for them in the less technical branches.

. Some high school graduates want to enter college, but find it impracticable because of financial limitations or the need to earn a living immediately. Many others, obviously, want to follow trades or semi-professional careers, but lack opportunity or ability to obtain suitable civilian training. The Navy seeks the assistance of educators in counseling such young men to consider the Naval Service.

Real Admiral T. L. Sprague, Chief of Naval Personnel, wrote the following as a forward to the Occupational Handbook:¹

The Navy, with its new techniques and weapons, is one of the world's largest employers of technically trained personnel. The Navy's occupational opportunities, however, must stand squarely on their own economic legs. They must face fair competition with civilian pay, job security and promotion.

Accordingly, the Navy Occupational Handbook has been prepared for the information of counselors, school administrators, teachers and their students, as well as for classification use and instruction within the Navy. It is a detailed factual presentation of job analyses and training opportunities for

1. Ibid., p. 11.

vocational guidance, classroom use and ready reference. In short, it is both a yardstick and a pointer.

I am confident that the handbook will fit appropriately into both civilian and Navy educational patterns.

As indicated in the first paragraph of this quotation, a large share of Navy training, particularly for enlisted personnel, is of the vocational type. There are, however, programs which offer a more general and liberal education. The U.S. Naval Academy grants a degree of Bachelor of Science to its graduates who complete a four year course of combined classical and technical education of collegiate grade. The Holloway Plan instituted the training of officer candidates for the Navy in institutions other than the Naval Academy. Under this plan, students receive a liberal education at an accredited college or university of their own choice.

There are many opportunities provided for personnel to continue their academic advancement and supplement their formal schooling after their entry into the service. Hundreds of courses are available to enlisted and officer personnel through the United States Armed Forces Institute, college correspondence courses, General Education Development tests, and classroom work.

Navy Training

In time of war, and to a lesser extent during peacetime, the objectives of the Navy training are nearly always concrete and limited. During World War II, training schools sought

to instruct the student in a set number of operations or duties. Curricula were based on a strict job analysis. This was the theory of vocational education being used in its most strict form. Men were taught by doing and then were given practical tests on equipment which they were being trained to operate or maintain. It was found that for certain important occupations literary facility and verbal comprehension were unimportant.¹ Specialized talent for operating machinery was found in many instances largely unrelated to the presence or absence of verbal abilities.

Due to specialized requirements of wartime training during World War II, a limited time for the training process, and large numbers of students, the principle characteristics of training became clarity of objective and definition of aim, learning by doing, recognition of the end as more important than the means to the end, standardization of methods of instruction, liberal use of learning aids, wide use of tests, and provision for small classes and individual instruction.²

Navy instructor training procedure reflected these policies. Before World War II, mastery of subject matter and attendant skills were considered the primary qualification

1. Alonso G. Grace et al., Educational Lessons From Wartime Training, The General Report of the Commission On Implications of Armed Services Educational Programs, The American Council on Education, p. 38. Washington, D.C.: The Council, 1948.

2. Ibid., p. 30-1.

for the instructor. Little attention was given to the professional training of instructors. Training was usually of the type that lent itself best to short apprentice on-the-job observation and short practice teaching periods. However, with the entry of educators into the service, instructor training programs were set up which included professional training. The curricula for pre-service training were based on the best-known principles of teaching from a military point of view. The curricula were also designed to train for specific instructional assignment, and the students were trained in various methods of instruction and testing used by regular instructors in that specialty. This approaches closely the trade school doctrine. The Navy found that instructor training is more effective if it takes place in the subject-matter area of the instructors involved.¹

As previously pointed out, only personnel thoroughly skilled in their specialties are ordered to duty as instructors. Having the skills required, all that remains for the pre-service school to give the prospective instructor is professional training. The integration of practice and theory can take place in the prospective instructor's training in the induction program on his new job and during in-service training. The four-week course for Service School instructors and recruit training personnel in the new

1. Ibid., p. 195.

instructor training schools is designed to provide maximum opportunity for the application of the principles studied in the course. For example, instructors discuss and show how to use training aids, then design and construct original models, and eventually use them in practice teaching. They also identify training aids for specific purposes and proceed to order them through the proper channels. Emphasis throughout the course is on the practical aspects of teaching.

Practice instruction is done in a somewhat artificial situation. The student presents his practice lesson to his classmates. There may be persons in the class who know much more about the subject than he, who are far better educated than he, and who are senior to him in rank or rating. This situation exists because time available, facilities, and other factors make practice instruction in any other situation impractical. This procedure is not as undesirable as it might seem at first glance. The school in which the student will eventually instruct is in the same school system as the instructor training school--the Navy. Therefore, it can be assured that the techniques the student has learned in the training school are developed and used through induction and in-service training programs. In other words, the student will get more realistic practice instructing in an apprentice type on-the-job program after he leaves the four-week training course.

The enlisted man in the Navy may not have a broad educational background. However, as he advances in rating, he becomes more proficient in his knowledge of the subject matter in his particular rate. Also, he is continually practicing teaching in an informal situation. When he becomes senior enough to instruct others in a formal school, his ability to translate his knowledge for others will depend to a great extent upon the training he is given in the use of proper techniques and methods of instruction. The Navy considers that if a prospective instructor is an expert in his field of instruction, if he is given the practical techniques of instructing in the instructor training school, and if he learns to apply these to instruction through in-service training, he will be a competent instructor in the Navy school system.

Summary

General and vocational education are complementary phases of preparing the individual for a successful life. They are conducted on principles which are very similar and their ultimate goals are essentially the same.

Instructor training is vocational education in that it prepares the individual for a specific profession or vocation. The characteristics of an efficient vocational program for training of instructional and supervisory personnel, as outlined by a vocational educator, are in close agreement with those of instructor training institutions in general.

Navy schools are not in competition with civilian schools. Prospective Navy recruits are urged to obtain as much general education as possible before entering the Navy, and are further encouraged to supplement that education with study after enlistment. Although much of Navy training is of the vocational trade school type, there are programs through which the service man can gain a liberal education.

Navy instructor training is conducted in a manner similar to the trade school. It is considered that selected naval personnel will develop into competent instructors if they are experts in the field in which they will instruct, if they learn the practical techniques of instructing, and apply them.

CHAPTER VII

CONCLUSIONS

Functions of the Instructor Training School

Many functions that have been described as those of the civilian instructor training school, in the Navy situation are actually performed by the Curriculum and Instructor Training Section, Training Division, Bureau of Naval Personnel. Although the instructor training school identifies those prospective instructors who, because of attitude or lack of ability, appear to be unsuited for instructional assignments, the Bureau makes the initial selection of instructor candidates. The pre-service training curriculum is formed and directed by the Instructor Training Section in the Bureau. Ultimate evaluation is vested in that Section. Officers in charge of schools are responsible to this Section for in-service training programs. Field work that is done by civilian instructor training schools is largely the responsibility of personnel in this Section. In fact, the mission of the Curriculum and Instructor Training Section is to assist naval instructors to:

1. Orient themselves to the job of instructing.

2. Interpret standard curricula in terms of available equipment and other local conditions, also to help put these curricula into operation.

3. Develop effective teaching methods appropriate to the subject being taught.

4. Obtain the fullest utilization of available equipment.

5. Develop shops and laboratories and organize appropriate work stations, enabling trainees to perform practical jobs under instruction.

6. Prepare instruction sheets to guide trainees in the performance of practical jobs.

7. Prepare instructional materials such as course outlines and lesson plans to improve instruction.

8. Develop appropriate tests for measuring the learning of students and the effects of instruction.

9. Prepare manuals for Navy instructors on proven teaching techniques.

Members of the Instructor Training Section spend much time in analysis of school problems in the field. They make and develop long range instructor training plans and assist in the development of tests. They also carry on experiments in instruction. This latter function is exemplified in an experiment presently in progress which is built around the idea of having one instructor stay with his class during their entire training period. Instruction is given in a

combination shop and classroom, providing related instruction in small amounts as needed. This system is favored over the extended lecture given over a longer period of time prior to the shop period. The Section also prepares several publications directly connected with education and training procedures including The Shipboard Training Manual, The Manual for Navy Instructors, and an officer's correspondence course entitled Education and Training.

As a consequence of the responsibilities held by the Instructor Training Section, many instructor training techniques will be performed by this unit, some by the instructor training school staff, and some jointly by the two organizations. There must be a clear definition of responsibility, duties, functions, and mission in order to avoid confusion and resulting inefficiency.

Selection

As pointed out in Chapter II, selection of instructor candidates is not, at the moment, a serious problem for the Navy. The demand for instructors is being filled largely by personnel requesting duty as instructors and motivation is not a major problem. An effort should be made to keep instructors' billets desirable ones in order to attract personnel of high caliber.

It is recommended that the emphasis be placed on personality and character in the Navy pre-service selection

program. At least a certain amount of scholarship will already be evident in the prospective instructor's attainment of the rank or rating necessary for selection. A standard of health necessary to an instructor is insured by the fact that the individual is on active duty in the Navy. Intelligence is measured by a battery of tests, including the General Classification Test, administered to all enlisted personnel upon initial entry into the service. An officer must have a certain degree of intelligence in order to obtain a commission. Speech will not ordinarily be a problem. Although consideration will necessarily be given to all of these elements, they will be more or less self evident. Character and personality remain the chief problems. It is true that a degree of each of these elements is necessary for an enlisted man to become a First Class or Chief Petty Officer, or an Officer to receive his commission, but the character and personality may not be that desired in an instructor.

It is recommended that students in all Navy schools be appraised for possible instructor candidates and an appropriate entry made in individual records. This information will, in part, serve the same purpose as the evidence which is available on the student in the civilian institution that makes its selection at the Junior year level.

Curriculum

The instructor training curriculum should prepare a competent instructor who will have the knowledge needed to

instruct, and who will cause the effect of action and reaction of his personality and background on a group, and their effect upon him, to be favorable to the instruction-learning situation. Because the Navy instructor candidate is an expert in his field at the time he is selected for pre-service training, emphasis in the curriculum will be placed on introducing him to effective techniques of instructing and the theory of learning. Sufficient time is not available in the Navy instructor training course for much personality development. Desirable personality should be a prime factor in selection of candidates and development may be emphasized in in-service training.

Great emphasis need not be placed on practice teaching in the Navy four-week instructor training course, because of the induction program and in-service training that are coordinated with it. However, those administering these programs must have a comprehensive appreciation of the theory and techniques of teaching in which the student has been indoctrinated in his pre-service training. This is necessary in order to effect proper integration. If the administrators and supervisors involved in the induction and in-service training programs do have the proper knowledge and appreciation of the student's pre-service curriculum, these programs may be particularly effective, for they are given in the specific subject matter in which the student will instruct.

Evaluation

Evaluation in instructor training should be carried on in a systematic way by all personnel responsible for any part of the training. Chapter III showed that the curriculum is actually developed by the instructor in his classroom. It is, therefore, essential that he participate in its evaluation. Administrators of Navy schools, for whom the prospective instructors will eventually work, should participate. They will know many of the instructors' current problems. It is obvious that administrators of the instructor training program should participate in the evaluation of its own curriculum. All of these, together with those in the Bureau of Naval Personnel who are directly responsible for the curriculum, should have a part in its evaluation and revision.

The student should be introduced to a systematic program of self evaluation of growth which will carry over into self evaluation of his instruction. Objective measurement of student growth in the instructor training institution should be supplemented by as much of a record of personal observation as it is possible to collect during the four-week course. This information, considered with previous records, should facilitate a fair appraisal.

Evaluation of the instructor and instruction should have development as its primary goal. Evaluation instruments must be used with, and not on, the instructor. The instructor

should be trained in systematically evaluating his own efforts, and himself as an instructor.

In-Service Training

In-service training is particularly significant to the Navy instructor because it is a second phase of his training. Much of the training received in pre-service civilian training, is received as in-service training in the Navy. As pointed out in Chapter V, practice instruction in the Navy instructor training school is carried on in an artificial situation. It is not until the new instructor arrives at his assigned school that he meets the real instruction-learning situation with all of its problems. Thus it is here, on the job, that he must put into practice the instruction techniques that he has learned. Beyond this need, in-service training should be a continuing program to facilitate on-the-job instructor growth toward better instruction.

Visitation should be a popular type of in-service training in the Navy. It may be employed to allow the instructor to observe school administration and instruction in other schools, and it should be used to assist in keeping the instructor abreast of practices, procedures, and technological changes in the Navy.

A Continuous Program

The Navy instructor candidate should learn to use efficient practical techniques of instruction, and he should

be given enough of the theory of learning to enable him to appreciate the need and the use of such techniques. This will require close liaison and coordination between administrators of pre-service and in-service instructor training programs.

The Naval Service enjoys the unusual advantage of having all of its schools, including the instructor training school, in the same school system. This facilitates carrying on a program of instructor education and instruction improvement as it must be conducted in order to be successful, continuously.

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